

# Mineral Industry Surveys

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## SULFUR IN JULY 2006

During the month, production of recovered elemental sulfur was 720,000 metric tons (t), according to the U.S. Geological Survey. July 2006 production was 6% higher than that of June 2006 and 7% lower than that of July 2005. Shipments were the same as those of June 2006. Producers' ending stocks for July 2006 were 170,000 t.

Sulfur production was significantly lower than it was in July 2005. Sulfur production at petroleum refineries has nearly recovered to the level experienced before two major hurricanes struck the Gulf Coast in August and September 2005, but major upgrades at BP p.l.c.'s Texas City, TX, refinery have limited sulfur production there while the sulfur recovery units are being refurbished (North American Sulphur Review, 2006). Acid gas reinjection at a large natural gas operation in Wyoming as well as decreased production at other operations reduced sulfur production from that source by 22% from that of July 2005. Production from refineries is expected to continue to increase,

but recovery from natural gas operations is not predicted to increase significantly.

Import and export data for July 2006 were not available at the time of publication and will be published in the Sulfur in August 2006 Mineral Industry Surveys along with apparent consumption. Imports of recovered sulfur for June 2006 were estimated to be 281,000 t; exports were 61,000 t. Imports of sulfuric acid for June 2006 were 208,000 t; exports were 11,000 t.

Significant adjustments have been made to the sulfur import data. Reports from the U.S. Census Bureau appear to underreport sulfur imports, especially material from Canada. The revised figures are based on Census information and data from personal communications with industry experts.

### Reference Cited

North American Sulphur Review, 2006, Supply: North American Sulphur Review, v. 17, no. 9, September, p. 3.

TABLE 1  
SALIENT SULFUR STATISTICS<sup>1</sup>

(Thousand metric tons)

Period	Production			Shipments, all sources	Ending stocks <sup>3</sup>
	Petroleum <sup>2</sup>	Natural gas	Total		
2005:					
January-December	6,940	1,810	8,750	8,720	XX
January-July	4,180	1,120	5,290	5,270	XX
July	623	153	776	776	175
August	647	163	811	812	175
September	489	141	630	634	165
October	478	136	614	614	158
November	555	129	683	671	167
December	593	120	714	721	156
2006:					
January	572	114	686	677	160
February	513	114	627	632	151
March	544	112	656	660	142
April	552	120	672	654	161
May	593	119	712	703	161
June	586 <sup>r</sup>	96	682 <sup>r</sup>	694 <sup>r</sup>	146 <sup>r</sup>
July <sup>p</sup>	601	118	720	694	170
Total	3,960	794	4,760	4,720	XX

<sup>p</sup>Preliminary. <sup>r</sup>Revised. XX Not applicable.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes a small quantity from coking operations.

<sup>3</sup>Subject to inventory adjustments.

TABLE 2  
U.S. IMPORTS OF SULFUR<sup>1</sup>

(Thousand metric tons and thousand dollars)

Period	Canada		Mexico		Venezuela		Total, all countries <sup>2</sup>	
	Quantity <sup>e</sup>	Value <sup>3</sup>	Quantity	Value <sup>3</sup>	Quantity <sup>e</sup>	Value <sup>3</sup>	Quantity <sup>e</sup>	Value <sup>3</sup>
2005:								
January-December	1,970	33,500	427	18,600	409	16,800	2,820	70,500
January-June	920	13,400	221	9,820	201	7,820	1,420	31,500
June	165	2,460	40	1,780	30	1,340	235	5,670
July	170	2,650	40	1,490	38	1,440	218	5,610
August	170	2,820	20	808	31	1,280	221	5,040
September	160	3,020	39	1,600	41	1,670	241	6,360
October	185	3,570	44	1,900	37	1,620	227	7,770
November	180	3,680	29	1,130	20	819	233	5,710
December	185	4,360	34	1,890	41	2,180	261	8,500
2006:								
January	165	4,190	58	2,520	37	1,680	260	8,460
February	150	3,910	43	1,810	40	1,650	233	7,450
March	165	3,970	44	2,010	34	1,580	243	7,690
April	205	4,290	29	1,420	30	1,410	264	7,230
May	210	3,260	29	1,390	19	925	259	5,820
June	205	2,550	44	1,970	29	1,270	281	6,120
Total	1,100	22,200	247	11,100	189	8,510	1,540	42,800

<sup>e</sup>Estimated.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>May include other countries not listed.

<sup>3</sup>Declared customs valuation.

Sources: U.S. Census Bureau data as adjusted by U.S. Geological Survey and PentaSul North America Sulphur Service.

TABLE 3  
U.S. IMPORTS OF SULFURIC ACID<sup>1</sup>

(Thousand metric tons and thousand dollars)

Period	Canada			Mexico			Total, all countries <sup>2</sup>		
	Quantity	Sulfur content	Value <sup>3</sup>	Quantity	Sulfur content	Value <sup>3</sup>	Quantity	Sulfur content	Value <sup>3</sup>
2005:									
January-December	2,000	656	80,700	398	129	7,920	2,660	871	102,000
January-June	1,020	336	38,800	209	68	3,850	1,350	441	49,000
June	144	47	5,360	26	8	445	189	62	6,380
July	168	55	6,840	9	3	187	213	70	7,790
August	156	51	6,490	19	6	350	196	64	9,150
September	169	55	6,890	35	11	626	241	79	8,260
October	178	58	7,880	60	20	1,730	253	83	11,600
November	138	45	5,910	38	12	674	181	59	6,820
December	172	56	7,910	28	9	504	229	75	9,640
2006:									
January	194	63	7,800	16	5	444	244	80	9,030
February	161	53	6,550	23	7	416	201	66	7,670
March	198	65	7,760	19	6	454	255	83	9,050
April	207	68	7,910	16	5	400	234	77	9,100
May	207	68	7,840	13	4	307	229	75	8,320
June	189	62	7,030	2	1	56	208	68	7,860
Total	1,160	378	44,900	89	29	2,080	1,370	448	51,000

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>May include other countries not listed.

<sup>3</sup>Declared customs valuation.

Source: U.S. Census Bureau.

TABLE 4  
U.S. EXPORTS OF SULFUR AND SULFURIC ACID<sup>1</sup>

(Thousand metric tons and thousand dollars)

Period	Sulfur		Sulfuric acid		
	Quantity	Value <sup>2</sup>	Quantity	Sulfur content	Value <sup>2</sup>
2005:					
January-December	683	55,900	338	108	29,500
January-June	301	26,800	187	60	15,600
June	56	5,920	38	12	3,630
July	64	4,520	24	8	1,920
August	71	5,330	25	8	2,600
September	42	3,470	26	8	2,810
October	104	7,070	32	10	3,020
November	14	2,940	7	2	992
December	87	5,790	37	12	2,560
2006:					
January	55	4,430	14	4	1,400
February	15	1,900	38	12	2,400
March	68	4,710	23	8	2,000
April	11	1,270	19	6	1,600
May	19	2,090	17	5	1,400
June	61	8,790	11	4	1,370
Total	229	23,200	121	40	10,200

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Declared f.a.s. (free alongside ship) valuation.

Source: U.S. Census Bureau.

TABLE 5  
U.S. CONSUMPTION OF SULFUR<sup>1</sup>

(Thousand metric tons)

Period	Domestic sources <sup>2</sup>	Imports <sup>e</sup>	Consumption
2005:			
January-December	8,060	2,790	10,900
January-June	4,190	1,420	5,610
June	719	235	954
July	712	218	930
August	741	221	962
September	592	241	833
October	510	227	737
November	657	233	890
December	634	261	895
2006:			
January	622	260	882
February	617	233	850
March	592	243	835
April	643	264	907
May	684	259	943
June	633	281	914
Total	3,790	1,540	5,330

<sup>e</sup>Estimated.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Calculated as shipments minus exports.

TABLE 6  
RECOVERED SULFUR PRODUCED AND SHIPPED IN THE UNITED STATES,  
BY PAD (PETROLEUM ADMINISTRATION FOR DEFENSE) DISTRICT<sup>1</sup>

(Thousand metric tons)

District and source	July 2006 <sup>P</sup>		June 2006		January - July 2006 <sup>2</sup>		January - July 2005 <sup>2</sup>	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
PAD 1:								
Petroleum and coke	21	20	19	19	139	139	147 <sup>r</sup>	148 <sup>r</sup>
Natural gas	2	2	1	1	10	10	12 <sup>r</sup>	12 <sup>r</sup>
Total	23	21	21	20	149	149	159 <sup>r</sup>	159 <sup>r</sup>
PAD 2:								
Petroleum and coke	89	89	90	91	591	594	598 <sup>r</sup>	597 <sup>r</sup>
Natural gas	3	3	3	3	22	22	24	24
Total	93	91	93	95	613	616	622 <sup>r</sup>	621 <sup>r</sup>
PAD 3: <sup>3</sup>								
Petroleum and coke	376	361	360	369 <sup>r</sup>	2,450	2,430	2,640 <sup>r</sup>	2,640
Natural gas	39	38	37	38	258	259	292	297
Total	415	401	397	406 <sup>r</sup>	2,710	2,690	2,930 <sup>r</sup>	2,940 <sup>r</sup>
PAD 4 and 5: <sup>4</sup>								
Petroleum and coke	116	109	118	116	785	756	794 <sup>r</sup>	771 <sup>r</sup>
Natural gas	74	71	54	57	503	504	791 <sup>r</sup>	782 <sup>r</sup>
California	95	89	97	95	642	616	629 <sup>r</sup>	603 <sup>r</sup>
Total	189	180	172	173	1,290	1,260	1,590 <sup>r</sup>	1,550 <sup>r</sup>
Grand total	720	694	682 <sup>r</sup>	694 <sup>r</sup>	4,760	4,720	5,290 <sup>r</sup>	5,270 <sup>r</sup>

<sup>P</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>May include revisions.

<sup>3</sup>Includes the U.S. Virgin Islands.

<sup>4</sup>Quantities produced and shipped in California included in petroleum and natural gas. California total shown for information purposes only.

TABLE 7  
COMPARATIVE SULFUR AND SULFURIC ACID STATISTICS<sup>1</sup>

(Million metric tons per year [annualized basis] and dollars per metric ton for period shown)

	2006			2005
	July	June	Total	total
Production	8.47 <sup>p</sup>	8.29 <sup>r</sup>	8.19 <sup>r</sup>	8.75 <sup>r</sup>
Shipments	8.17 <sup>p</sup>	8.44 <sup>r</sup>	8.12 <sup>r</sup>	8.72 <sup>r</sup>
Exports of sulfur	NA	0.74	0.46	0.58
Imports of sulfur:				
Canada	NA	2.49 <sup>e</sup>	2.22 <sup>e</sup>	1.97 <sup>e</sup>
Mexico	NA	0.54	0.50	0.45
Venezuela	NA	0.35 <sup>e</sup>	0.38 <sup>e</sup>	0.41 <sup>e</sup>
Total <sup>2</sup>	NA	3.42 <sup>e</sup>	3.11 <sup>e</sup>	2.79 <sup>e</sup>
Exports of H <sub>2</sub> SO <sub>4</sub>	NA	0.13	0.24	0.31
Imports of H <sub>2</sub> SO <sub>4</sub> :				
Canada	NA	2.30	2.33	1.87
Mexico	NA	0.02	0.18	0.40
Total <sup>2</sup>	NA	2.53	2.76	2.66
Consumption: <sup>3</sup>				
Domestic sources	NA	7.70	7.64	8.06 <sup>r</sup>
Imports	NA	3.42 <sup>e</sup>	3.11 <sup>e</sup>	2.79 <sup>e</sup>
Total	NA	11.12	10.75	10.85 <sup>r</sup>
Sulfur export values <sup>4</sup>	NA	144	101	84
Sulfur import values: <sup>4</sup>				
Canada	NA	12	20	17
Mexico	NA	45	45	41
Venezuela	NA	44	45	41
Average <sup>2</sup>	NA	22	28	25
H <sub>2</sub> SO <sub>4</sub> export values <sup>4</sup>	NA	125	84	86
H <sub>2</sub> SO <sub>4</sub> import values: <sup>4</sup>				
Canada	NA	37	39	40
Mexico	NA	28	23	20
Average <sup>2</sup>	NA	38	37	37

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised. NA Not available.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes other countries not listed.

<sup>3</sup>Because July trade data were not available, July consumption was not determined.

<sup>4</sup>Average value per ton for most recent data available.